

Torque Meter for TQ-2000 series **TQ-5300**

◆ Overview

TQ-5300 Torque meter, used with the TQ-2000 series High-stiffness torque detector, can convert the pulse output of the detector to digital torque value and analog voltage output. Four kinds of digital interface are provided as options as digital output, which allow digital communication at higher speed.



◆ Features

• 4 kinds of digital output (RS-232C, EtherCAT, PROFIBUS, CAN)

Four kinds of digital interface allow output of torque measurement value without decreasing accuracy that the torque detector originally has.

• Analog output at high speed response

The TQ-5300 calculates for every one cycle the frequency which corresponds to the detected torque amount, and outputs them as analog signal at high speed response. Optimum control by following up the transient torque having wide fluctuation.

• Rotation speed analog output

Simultaneous analog output of torque and rotation speed value. Using TQ-0531 (option) enables 2-ch output of torque signal. Helpful when you use outputs in different purpose.

• Multi-range measurement function

Optional multi-range function (TQ-0536) covers settings for multiple torque capacities in one torque detector. No need to replace a torque detector for measurement of different torque capacities.

*Please consult before the order when you use the multi-range function

◆ Specifications

[Input section]			[Pulse output section]		
Applicable detector	Torque	TQ-1000 series, TQ-2000 series	Applicable detector	Torque	
	Rotation speed	MP-981, MP-9820		Rotation speed	
[Display section]			[Interface section]		
Number of display digits	Torque	Polarity +5 digit (excluding decimal point)	REMOTE	External input item	Selection of rotation direction : contact input
	Rotation speed	Polarity +5 digit			Start acquiring torque-zero correction value : contact input
Unit	Torque	N·m, kN·m		External output item	READY : contact output
	Rotation speed	r/min			Comparator : contact output
[Analog output section]			Communication interface (option)	Type	Confirmation of setting condition
Output format	Torque	Voltage output 0 to ±10V/F.S.			RS-232C
	Rotation speed	Voltage output 0 to ±10V/F.S.		CAN output	
Analog conversion time	Torque	1 period +5 µs or less		PROFIBUS	
	Rotation speed	Within 1 ms	EtherCAT		
2 CH switching (option)	2 CH of output item selectable from torque or rotation speed		Mounting method	Simultaneous installation of communication options is available only the combination of RS-232C and CAN.	

[General specification]				
Power supply voltage		DC 24V (18 to 30 V)	Weight	approx. 700 g
Power consumption		20 VA or less (when sensor connected, excluding option)	CE Marking	LVD Directive:2014/35/EUEN61010-1 class1
Operating range	temperature	0 to 50 °C		EMC Directive:2014/30/EUEN61326-1 class1 Industrial setting
	humidity	20 to 80 % (with no condensation)		RoHS Directive:2011/65/EUEN50591
Storage range	temperature	- 10 to 60 °C	FCC	CFR47 Part15 SubpartB class A
	humidity	20 to 85 % (with no condensation)	Accessory	DC power input connector × 1, Connector for REMOTE × 1, analog-pulse output connector × 1, rubber foot × 4, instruction manual × 1
Outer dimensions		170 (W) × 49 (H) × 150 (D)mm (excluding protruded section)		

◆ Option

Model	Product name	Model	Product name
TQ-0531	Analog output switching function	TQ-0536	Multi-range / high precision function
TQ-0532	RS-232C communication function	TQ-0811	Remote cable 2 m
TQ-0533	CAN output function	TQ-0821	Analog-pulse output cable 2 m
TQ-0534	PROFIBUS communication function	CT-0673	Panel mounting fixture
TQ-0535	EtherCAT communication function		